

TECHNICAL DATA
DATA SHEET 586, REV -

HERMETIC POWER MOSFET P-CHANNEL

FEATURES:

- -100 Volt, 0.20 Ohm MOSFET
- Isolated and Hermetically Sealed
- Simple Drive Requirements
- Repetitive Avalanche Rating

MAXIMUM RATINGS

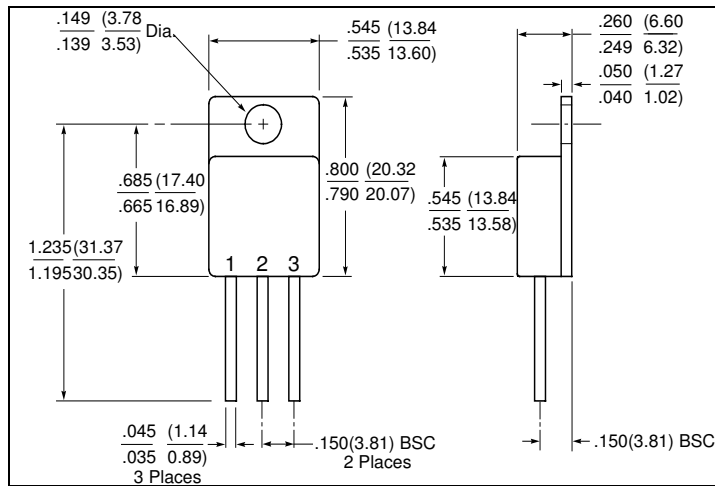
ALL RATINGS ARE AT $T_A = 25^\circ\text{C}$ UNLESS OTHERWISE SPECIFIED.

RATING	SYMBOL	MIN.	TYP.	MAX.	UNITS
GATE TO SOURCE VOLTAGE	V_{GS}	-	-	± 20	Volts
CONTINUOUS DRAIN CURRENT $V_{GS}=10\text{V}, T_C = 25^\circ\text{C}$ $V_{GS}=10\text{V}, T_C = 100^\circ\text{C}$	I_D	-	-	-18 -11	Amps
PULSED DRAIN CURRENT @ $T_C = 25^\circ\text{C}$	I_{DM}	-	-	-72	Amps
OPERATING AND STORAGE TEMPERATURE	T_{OP}/T_{STG}	-55	-	150	$^\circ\text{C}$
TERMAL RESISTANCE JUNCTION TO CASE	$R_{\theta JC}$	-	-	0.83	$^\circ\text{C/W}$
TOTAL DEVICE DISSIPATION @ $T_C = 25^\circ\text{C}$	P_D	-	-	125	Watts

ELECTRICAL CHARACTERISTICS

DRAIN TO SOURCE BREAKDOWN VOLTAGE $V_{GS} = 0\text{V}, I_D = 1.0\text{mA}$	BV_{DSS}	-100	-	-	Volts
DRAIN TO SOURCE ON STATE RESISTANCE $V_{GS} = -10\text{V}, I_D = -11\text{A}$ $V_{GS} = -10\text{V}, I_D = -18\text{A}$	$R_{DS(ON)}$	-	-	0.20 0.22	Ω
GATE THRESHOLD VOLTAGE $V_{DS} = V_{GS}, I_D = -250\mu\text{A}$	$V_{GS(th)}$	-2.0	-	-4.0	Volts
FORWARD TRANSCONDUCTANCE $V_{DS} \geq -15\text{V}, I_{DS} = -11\text{A}$	g_{fs}	6.2	-	-	$\text{S}(1/\Omega)$
ZERO GATE VOLTAGE DRAIN CURRENT $V_{DS} = 0.8 \times \text{Max. Rating}, V_{GS} = 0\text{V}$ $V_{DS} = 0.8 \times \text{Max. Rating}$ $V_{GS} = 0\text{V}, T_J = 125^\circ\text{C}$	I_{DSS}	-	-	-25 -250	μA
GATE TO SOURCE LEAKAGE FORWARD @ RATED GATE TO SOURCE LEAKAGE REVERSE V_{GS}	I_{GSS}	-	-	100 -100	nA
TOTAL GATE CHARGE GATE TO SOURCE CHARGE GATE TO DRAIN CHARGE $V_{GS} = 10\text{VOLTS},$ $50\% \text{ RATED } V_{DS},$ $\text{RATED } I_D$	Q_g Q_{gs} Q_{gd}	31	-	60 13 35.2	nC
TURN ON DELAY TIME RISE TIME TURN OFF DELAY TIME FALL TIME $V_{DD} = -50\text{V},$ $\text{RATED } I_D,$ $R_G = 9.1\Omega$	$t_{d(ON)}$ t_r $t_{d(OFF)}$ t_f	-	-	35 85 85 65	nsec
DIODE FORWARD VOLTAGE $T_J = 25^\circ\text{C}, I_S = 34\text{A},$ $V_{GS} = 0\text{V}$	V_{SD}	-	-	-4.2	Volts
DIODE REVERSE RECOVERY TIME REVERSE RECOVERY CHARGE $T_J = 25^\circ\text{C},$ $I_f = \text{RATED } I_D,$ $di/dt = -100\text{A/sec}$	t_{rr} Q_{rr}	-	-	280 3.6	nsec μC
INPUT CAPACITANCE OUTPUT CAPACITANCE REVERSE TRANSFER CAPACITANCE $V_{GS} = 0\text{ Volts},$ $V_{DS} = 25\text{ Volts},$ $f = 1\text{ MHz}$	C_{iss} C_{oss} C_{rss}	-	1400 600 200	-	pF

MECHANICAL DIMENSIONS: in Inches / mm



TO-254

PINOUT TABLE

DEVICE TYPE	PIN 1	PIN 2	PIN 3
MOSFET TO-254 PACKAGE	DRAIN	SOURCE	GATE

TECHNICAL DATA

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